

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/23280

BEST AVAILABLE COPY

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : G 06 F 17/60 US CL : 705/50 According to International Patent Classification (IPC) or to both national classification and IPC																				
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 705/50; 340/928, 937, 982, 981, 426.16, 426.2, 428 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)																				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Category *</th> <th style="width: 70%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width: 20%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td>US 5,101,200 A (SWETT, Paul H.) 31 March 1992 (31.03.1992), please see entire document.</td> <td style="text-align: center;">1-5, 7-12, 14</td> </tr> <tr> <td style="text-align: center;">Y</td> <td>US 5,770,999 A (RHODES, Michael E.) 23 June 1998 (23.06.1998), column 18, lines 62-67 and column 19, lines 1-17.</td> <td style="text-align: center;">6</td> </tr> <tr> <td style="text-align: center;">Y</td> <td>US 6,484,260 B1 (SCOTT et al.) 19 November 2002 (19.11.2002), column 9, lines 47-53; column 3, lines 8-19 and column 7, lines 27-31.</td> <td style="text-align: center;">13 and 29</td> </tr> <tr> <td style="text-align: center;">Y</td> <td>US 5,805,082 A (HASSETT, John J.) 8 September 1998 (08.09.1998), column 3, lines 66-67; col. 4, lines 1-28; col. 13, lines 23-28; col. 14, lines 57-64; col. 15, lines 17-22; col. 2, lines 35-38; col. 13, lines 33-44.</td> <td style="text-align: center;">21-24, 31</td> </tr> <tr> <td style="text-align: center;">X</td> <td>US Pat. Publication US 2003/0020634 A1 (BANERJEE et al.) 30 January 2003 (30.01.2003), please see entire document.</td> <td style="text-align: center;">15-20, 25-28, 30, 32-33</td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 5,101,200 A (SWETT, Paul H.) 31 March 1992 (31.03.1992), please see entire document.	1-5, 7-12, 14	Y	US 5,770,999 A (RHODES, Michael E.) 23 June 1998 (23.06.1998), column 18, lines 62-67 and column 19, lines 1-17.	6	Y	US 6,484,260 B1 (SCOTT et al.) 19 November 2002 (19.11.2002), column 9, lines 47-53; column 3, lines 8-19 and column 7, lines 27-31.	13 and 29	Y	US 5,805,082 A (HASSETT, John J.) 8 September 1998 (08.09.1998), column 3, lines 66-67; col. 4, lines 1-28; col. 13, lines 23-28; col. 14, lines 57-64; col. 15, lines 17-22; col. 2, lines 35-38; col. 13, lines 33-44.	21-24, 31	X	US Pat. Publication US 2003/0020634 A1 (BANERJEE et al.) 30 January 2003 (30.01.2003), please see entire document.	15-20, 25-28, 30, 32-33
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																		
X	US 5,101,200 A (SWETT, Paul H.) 31 March 1992 (31.03.1992), please see entire document.	1-5, 7-12, 14																		
Y	US 5,770,999 A (RHODES, Michael E.) 23 June 1998 (23.06.1998), column 18, lines 62-67 and column 19, lines 1-17.	6																		
Y	US 6,484,260 B1 (SCOTT et al.) 19 November 2002 (19.11.2002), column 9, lines 47-53; column 3, lines 8-19 and column 7, lines 27-31.	13 and 29																		
Y	US 5,805,082 A (HASSETT, John J.) 8 September 1998 (08.09.1998), column 3, lines 66-67; col. 4, lines 1-28; col. 13, lines 23-28; col. 14, lines 57-64; col. 15, lines 17-22; col. 2, lines 35-38; col. 13, lines 33-44.	21-24, 31																		
X	US Pat. Publication US 2003/0020634 A1 (BANERJEE et al.) 30 January 2003 (30.01.2003), please see entire document.	15-20, 25-28, 30, 32-33																		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Special categories of cited documents:</th> <th style="width: 60%;">Description</th> </tr> </thead> <tbody> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E" earlier application or patent published on or after the international filing date</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&amp;" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </tbody> </table>			Special categories of cited documents:	Description	"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed							
Special categories of cited documents:	Description																			
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention																			
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone																			
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art																			
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family																			
"P" document published prior to the international filing date but later than the priority date claimed																				
Date of the actual completion of the international search 27 April 2005 (27.04.2005)		Date of mailing of the international search report 14 JUN 2005																		
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer JAMES P. TRAMMELL Telephone No. (571) 272-6712 																		